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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,456	12/21/2001	Douglas G. Ivey	RR-496	5482
20427	7590	11/05/2003	EXAMINER	
RODMAN RODMAN 7 SOUTH BROADWAY WHITE PLAINS, NY 10601			ZIMMERMAN, JOHN J	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,456

Applicant(s)

IVEY ET AL.

Examiner

John J. Zimmerman

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 69, 73, 76-79 and 81-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 69, 73 and 76-79 is/are allowed.
- 6) ☒ Claim(s) 81-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

SECOND OFFICE ACTION

Amendments

1. This Office Action is in response to the Amendment received October 6, 2003. Claims 69, 73, 76-79 and 81-89 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 81-89 are rejected under 35 U.S.C. 102(b) as being anticipated by Ivey (CA 2,268,867).

4. Ivey (CA 2,268,867) discloses a layered composite material comprising a layer of a first alloy species of an alloy, having first alloy species properties, and a layer of a second alloy species of the alloy, having second alloy species properties (e.g. see Figure 14 and page 22, lines 4-30). According to Ivey, the BSE images show distinct layers comprising different phases of gold-tin compositions.

5. Claims 81-89 are rejected under 35 U.S.C. 102(a) as being anticipated by Ivey (U.S. Patent 6,245,208).

6. Ivey (U.S. Patent 6,245,208 to a different inventive entity than the pending application) discloses a layered composite material comprising a layer of a first alloy species of an alloy, having first alloy species properties, and a layer of a second alloy species of the alloy, having second alloy species properties (e.g. see Figure 14 and column 16, lines 1-59). According to Ivey, the BSE images show distinct layers comprising different phases of gold-tin compositions.

7. Claims 81, 82 and 84 are rejected under 35 U.S.C. 102(b) as being anticipated by Zakel et al. ("Flip Chip Assembly Using Gold, Gold-Tin, and Nickel-Gold Metallurgy", Flip-Chip Technologies, ed., J. Lau, McGraw-Hill, (1995), pp. 415-468).

8. Zakel discloses a layered composite material comprising a layer of a first alloy species of an alloy, having first alloy species properties, and a layer of a second alloy species of the alloy, having second alloy species properties (e.g. see page 430-431). According to Zakel, the article exhibits an "Au-AuSn-AuSn₂-AuSn₄-Sn sandwich structure".

Allowable Subject Matter

9. Claims 69, 73 and 76-79 are allowed.

Response to Arguments

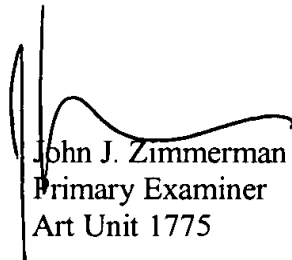
10. Applicant's arguments filed October 6, 2003 have been fully considered but they are not persuasive with regards to the remaining rejections.

11. Applicant contends that the use of "consisting essentially of" eliminates the additional phases disclosed in the layers of the Ivy references. The term "consisting essentially of", however, allows for additional constituents which do not affect the basic and novel characteristics of the invention, *Ex parte Davis, et al.*, 80 USPQ 448 (PTO Bd. App. 1948); *In re Janakirama-Rao*, 137 USPQ 893 (CCPA 1963). When applicant contends that modifying components in the prior art compositions are excluded by the recitation of "consisting essentially of", applicant has the burden of showing that the basic and novel characteristics of the applicant's invention are materially affected by those components, *In re De Lajarte*, 143 USPQ 256 (CCPA 1964). Applicant has not factually shown that any additional phases in the layers of the applied references affect the basic and novel characteristics of the applicant's invention and therefore the additional phases of Ivy are not prohibited by the "consisting essentially of" language. Regarding the Zakel reference, applicant argues that the layers of Zakel occur during intermediate steps. The fact that Zakel's layered configuration occurs in intermediate steps is not relevant, however, to the fact that the layered structures were produced as actual physical articles and were photographed. The layered structures of Zakel are actual physical layered articles that anticipate the rejected claims.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
October 31, 2003